

**UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF MICHIGAN  
SOUTHERN DIVISION**

IN RE FLINT WATER LITIGATION

Case No. 5:16-cv-10444-JEL-MKM  
Hon. Judith E. Levy

This Document Relates To:

*Gaddy et al. v. Flint et al.*  
*Meeks et al. v. Flint et al.*

Case No. 5:17-cv-11166-JEL-MKM  
Case No. 5:17-cv-11165-JEL-MKM

---

**DEFENDANTS VEOLIA NORTH AMERICA, LLC, VEOLIA NORTH  
AMERICA, INC., AND VEOLIA WATER NORTH AMERICA  
OPERATING SERVICES, LLC'S OPPOSITION TO BELLWETHER  
PLAINTIFFS' MOTIONS *IN LIMINE* TO EXCLUDE EVIDENCE OF  
ALTERNATIVE SOURCES OF LEAD AND ALTERNATIVE CAUSES OF  
THEIR ALLEGED CONDITIONS**

## **STATEMENT OF ISSUES PRESENTED**

1. Is evidence, testimony, and argument about alternative causes of Plaintiffs' injuries and alternative sources of lead exposure relevant to Plaintiffs' claims?

**VNA answers:** "Yes"

**Plaintiffs answer:** "No"

2. Is the probative value of evidence, testimony, and argument about alternative causes of Plaintiffs' injuries and alternative sources of lead exposure substantially outweighed by the risk of unfair prejudice, juror confusion, or undue delay under Federal Rule of Evidence 403?

**VNA answers:** "No"

**Plaintiffs answer:** "Yes"

**CONTROLLING OR MOST APPROPRIATE AUTHORITIES**

*Allen v. Brown Clinic, P.L.L.P.*, 531 F.3d 568 (8th Cir. 2008)

*Wilder v. Eberhart*, 977 F.2d 673 (1st Cir. 1992)

*Powell-Murphy v. Revitalizing Auto Cmtys. Env'tl. Response Tr.*,  
333 Mich. App. 234 (2020)

Fed. R. Evid. 402

Fed. R. Evid. 403

## TABLE OF CONTENTS

	<b>Page</b>
INTRODUCTION .....	1
BACKGROUND .....	2
LEGAL STANDARD.....	4
ARGUMENT .....	4
A.    The Testimony Of VNA's Experts About Alternative Sources Of Lead And Alternative Causes Of Their Alleged Conditions Is Highly Relevant.....	5
1.    Evidence Of Alternative Sources Of Lead And Alternative Causes Of Plaintiffs' Alleged Conditions Is Relevant To Causation.....	5
2.    VNA's Evidence Is Not Speculative .....	11
B.    The Testimony Of VNA's Experts About Alternative Sources Of Lead And Potential Alternative Causes Of Plaintiffs' Alleged Conditions Is Not Substantially More Prejudicial Than Probative.....	18
CONCLUSION.....	20

## INTRODUCTION

In two of their seven motions *in limine*, Plaintiffs seek to preclude VNA from presenting evidence, testimony, or argument about alternative sources of lead exposure or alternative causes of their alleged conditions. The Court should deny the motions because Plaintiffs misconstrue the relevance standard and attempt to incorrectly shift the burden of proof on causation to VNA.

VNA’s experts are not required to identify any particular alternative source of lead or alternative cause of Plaintiffs’ alleged conditions as the “most likely cause” of Plaintiffs’ conditions for evidence on these topics to be relevant. Rather, *Plaintiffs* have the burden to show that lead from Flint water—and not something else—caused their injuries. Indeed, under Michigan law, a plaintiff in a toxic-tort action has an affirmative duty to perform a “differential diagnosis” to establish causation—that is, plaintiffs must introduce the testimony of an expert who has considered and ruled out all reasonably likely alternative causes. In order to contest whether Plaintiffs met their burden of proof on causation, VNA is permitted to present evidence on alternative sources of lead or alternative causes of Plaintiffs’ alleged conditions, even if they are merely possible alternative causes.

VNA’s evidence and expert testimony about other sources of lead and other possible causes of Plaintiffs’ alleged injuries is relevant to the critical question of whether lead in Flint water caused those alleged injuries. It also is directly relevant

to the reliability of the differential diagnoses performed by Plaintiffs' experts, even if VNA's experts do not identify any of these alternatives as the most likely cause of Plaintiffs' alleged conditions. Significantly, Plaintiffs' experts concede that there are myriad different alternative sources of lead and alternative possible causes of Plaintiffs' alleged conditions. Further, VNA's experts do not merely identify speculative alternative sources and causes; instead, they tie those alternative sources and causes to the individual Plaintiffs' particular circumstances.

Plaintiffs' contention that the evidence is substantially more prejudicial than probative is mistaken. The evidence has significant probative value. Plaintiffs make only one very narrow argument about prejudice—they say that evidence about one Plaintiff's family history of divorce and abuse is too prejudicial. But VNA's experts carefully explained the relevance of that evidence, in a way that was scientific and dispassionate, not inflammatory. And Plaintiffs make no argument about prejudice with respect to the other three bellwether Plaintiffs.

This Court should therefore deny both motions and permit evidence about alternative sources of lead exposure and alternative causes of Plaintiffs' alleged injuries.

## **BACKGROUND**

Two of Plaintiffs' motions *in limine* seek to preclude VNA from presenting evidence of alternative causes of Plaintiffs' alleged injuries. The first seeks to

preclude VNA’s epidemiology and toxicology experts, Dr. Brent L. Finley and Dr. Douglas L. Weed, from offering testimony about alternative sources of lead that may have caused Plaintiffs’ alleged conditions. *See Br. in Supp. of Pls. Mot. to Exclude Evidence, Testimony, or Argument About Alternative Lead Exposures Not Supported By Expert Testimony (Alt. Sources MIL) 1, ECF No. 513, PageID.38617.* The second seeks to preclude VNA’s medical experts from offering testimony or evidence about various potential alternative causes of Plaintiffs’ alleged conditions. *See Br. in Supp. of Pls. Mot. to Exclude Evidence, Testimony, or Argument About Alternative Causes of Plaintiffs’ Injuries Not Supported by Expert Testimony (Alt. Causes MIL) 1, ECF No. 508, PageID.37786.*

Plaintiffs’ core argument in both motions is that the testimony of VNA’s experts on these topics is irrelevant because VNA’s experts do not testify that these alternative sources of lead or alternative causes of Plaintiffs’ alleged conditions “more likely than not” caused Plaintiffs’ injuries. Alt. Sources MIL 7, 12-13, PageID.38623, 38628-38629; Alt. Causes MIL 6, 9-10, 14-15, PageID.37791, 37794-37795, 37799-37800. Plaintiffs also argue that the testimony of VNA’s experts about these alternative sources of lead and alternative causes of their alleged conditions is speculative. Alt. Sources MIL 12-13, PageID.38628-38629; Alt. Causes MIL 16-17, PageID.37801-37802. Finally, Plaintiffs contend that permitting VNA’s experts to testify to these topics would be substantially more prejudicial than

probative. Alt. Sources MIL 13, PageID.38629; Alt. Causes MIL 18, PageID.37803. Because Plaintiffs' two motions seek to exclude similar types of evidence and rely on similar legal arguments, this brief responds to both motions together.

## **LEGAL STANDARD**

Relevant evidence is generally admissible. Fed. R. Evid. 402. Evidence is relevant if "it has any tendency to make a fact more or less probable than it would be without the evidence" and "the fact is of consequence in determining the action." Fed. R. Evid. 401. Under Rule 403, courts may exclude relevant evidence only if "its probative value is substantially outweighed by a danger of . . . unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence." Fed. R. Evid. 403.

## **ARGUMENT**

Plaintiffs have moved to exclude evidence or argument related to alternative sources of lead or alternative causes of their alleged conditions. The Court should deny the motions because the evidence is very relevant to whether Plaintiffs met their burden of proving causation, and Plaintiffs have not established that the probative value of this evidence is substantially outweighed by its capacity to cause unfair prejudice or to confuse the jury.

**A. The Testimony Of VNA’s Experts About Alternative Sources Of Lead And Alternative Causes Of Their Alleged Conditions Is Highly Relevant**

Plaintiffs’ core argument is that the testimony of VNA’s experts about alternative sources of lead and alternative causes of their alleged conditions is irrelevant because VNA’s experts did not say that these alternative sources and causes “more likely than not” caused Plaintiffs’ alleged conditions. This evidence is very relevant, however, because Plaintiffs have an affirmative obligation to “rule in” exposure to lead-contaminated water as the most likely cause of their injuries *and* “rule out” all reasonable alternative causes, and this evidence bears on whether they have done so.

**1. Evidence Of Alternative Sources Of Lead And Alternative Causes Of Plaintiffs’ Alleged Conditions Is Relevant To Causation**

The testimony of VNA’s experts about alternative sources of lead and alternative causes of Plaintiffs’ alleged injuries is relevant for at least two reasons. First, evidence of alternative sources of lead and alternative causes of Plaintiffs’ alleged injuries is relevant to the key question whether Plaintiffs’ alleged injuries were caused by exposure to lead in Flint’s water. Plaintiffs have the burden of proof on causation (as they do on every element of professional negligence); VNA can test Plaintiffs’ evidence without establishing that another cause is “more likely than not.”

Under Michigan law, the plaintiff in a negligence case bears the burden to prove the causal connection between the defendants' actions or omissions and his or her injuries. *Ray v. Swager*, 501 Mich. 52, 64 (2017). To carry this burden, Plaintiffs must present evidence that VNA's alleged professional negligence "more likely than not" caused their injuries. *Skinner v. Square D Co.*, 445 Mich. 153, 164-65 (1994). VNA then may present any evidence that tends to rebut Plaintiffs' evidence on causation, including evidence of possible alternative causes that are incompatible with Plaintiffs' causation theory. 57 Am. Jur. 2d *Negligence* § 441 (May 2009) ("To convince the trier of fact that the alleged negligence is not the legal cause of the injury, the defendant may produce other possible causes of the plaintiff's injury; these possible causes need not be proved with certainty or more probably than not."); *see Walker v. United Healthcare of Hardin, Inc.*, No. 07-cv-67, 2010 WL 3092648, at \*9 (W.D. Ky. Aug. 6, 2010) ("A plaintiff in a negligence action bears the burden of establishing causation. [Defendants] must only produce *credible evidence* which tends to discredit or rebut the plaintiff's evidence so as to convince the trier of fact that the alleged negligence was not the legal cause of the injury." (emphasis added; internal quotations and citations omitted)).

In similar circumstances, courts have rejected plaintiffs' attempts to limit defense evidence contesting causation. For example, the First Circuit reversed a trial court's decision to preclude a defense expert from testifying as to "possible causes"

of the plaintiff's injuries. *Wilder v. Eberhart*, 977 F.2d 673, 677 (1st Cir. 1992). The First Circuit explained that the burden of proving that a defendant's conduct "more likely than not" caused a plaintiff's injury rests on the plaintiff, and "the defendant need not disprove causation" or "prove another cause." *Id.* at 676. The court further noted that a defendant can prevent a plaintiff from carrying his burden by pointing to multiple "possible causes" of the plaintiff's injury, even if the defendant cannot prove these possible causes "with certainty or more probably than not." *Id.*

The Eighth Circuit likewise has held that a defense expert who failed to testify to "the actual cause" of an injury was nevertheless free to testify to "alternate 'possible' causes." *Allen v. Brown Clinic, P.L.L.P.*, 531 F.3d 568, 574-75 (8th Cir. 2008); *see Aycock v. R.J. Reynolds Tobacco Co.*, 769 F.3d 1063, 1069-70 (11th Cir. 2014) (observing that "courts treat evidence produced by plaintiff to prove causation differently than they treat evidence produced by defendants to rebut causation" and concluding that "[t]he defendant's ability to present alternative causes is of paramount importance to allowing for an adequate defense").

Furthermore, although federal evidentiary law controls on this point, it is worth noting that numerous state appellate courts have also rebuffed arguments like those raised by Plaintiffs here. *See, e.g., Roy v. St. Luke's Med. Ctr.*, 741 N.W.2d 256, 264 (Wis. Ct. App. 2007) ("Although the party with the burden of proof must

produce testimony based upon reasonable medical probabilities, the opposing party is not restricted to this requirement and may attempt to weaken the claim for injuries with medical proof couched in terms of possibilities.”); *Sakler v. Anesthesiology Assocs., P.S.C.*, 50 S.W.3d 210, 213 (Ky. Ct. App. 2001) (“defendants in medical malpractice actions may introduce expert witness testimony . . . couched only in terms of ‘possibility’” because the burden of proof rests on the plaintiff); *Williams v Eighth Jud. Dist. Ct.*, 262 P.3d 360, 368 (Nev. 2011) (“[I]f the defense expert’s testimony is used for the purpose of cross-examining the plaintiff’s expert or to otherwise contradict the plaintiff’s causation theory by comparing that theory to other plausible causes, the defense expert does not need to state each additional cause to a greater-than-50-percent probability.”); *RJ Reynolds Tobacco Co. v. Mack*, 92 So. 3d 244, 248 (Fla. Dist. Ct. App. 2012) (“By excluding [defendant’s] alternative causation evidence on the basis that its experts could not testify to a reasonable degree of medical probability, the trial court improperly shifted the burden of proof as to causation to [defendant].”). As these cases make clear, VNA may present evidence of multiple “possible” causes of Plaintiffs’ alleged conditions to rebut Plaintiffs’ attempts to attribute their alleged injuries to Flint water and VNA’s alleged professional negligence.

The cases Plaintiffs cite do not support the view that VNA is precluded from presenting evidence on alternative causes unless its experts meet the “more likely

than not” standard. Plaintiffs cite *Johnson v. Memphis Light Gas & Water Division*, 695 F. App’x 131 (6th Cir. 2017), but that decision actually supports VNA’s argument, not Plaintiffs’ argument. *See* Alt. Sources MIL 12-13, PageID.38628-38629; Alt. Causes MIL 15 n.3, PageID.37800. In *Johnson*, the Sixth Circuit addressed the standard applicable to the admissibility of causation evidence offered by the plaintiffs, not the defendants. The Court explained that although there are no “magic words” governing the admissibility of causation evidence, a plaintiff’s expert generally must “testify that his conclusion is more likely than not true” in order for the plaintiff to carry his burden of establishing causation. *Johnson*, 695 F. App’x at 137. VNA agrees with that; the key point is that the Sixth Circuit never suggested that a similar burden applies to *defendants*.

The only case Plaintiffs cite that addresses evidence of alternative causes invoked by a defendant is *People v. Lemons*, No. 348277, 2021 WL 5405754 (Mich. Ct. App. Nov. 18, 2021). Alt. Causes MIL 13-14, PageID.37798-37799. But *Lemons* never states—or even suggests—that defendants must identify alternative causes as the “more likely than not” cause of a plaintiff’s injuries for those alternative-causation theories to be admissible. All that the Court of Appeals held is that the trial court did not abuse its discretion when it excluded alternative-causation theories that “lacked factual or scientific support,” were “highly speculative,” and were “unrelated to the facts of the case.” *Id.* at \*6-7. Moreover,

Plaintiffs overlook the Court of Appeals' conclusion that one of the alternative theories advanced by the defendant was incorrectly excluded, not because the defendant adduced expert testimony that it was the "most likely" theory of what occurred, but simply because it "had factual support." *Id.* at \*7. As explained below, there is ample factual and scientific support for all of the alternative-causation theories identified by VNA's experts.

Evidence related to alternative sources of lead and alternative causes of Plaintiffs' alleged conditions is also directly relevant to the reliability of Plaintiffs' differential diagnosis. Under both Michigan and Sixth Circuit law, an expert witness for a plaintiff who claims that his or her injuries are attributable to a particular toxic exposure must perform a differential diagnosis, which requires the expert to identify and "rule out" all reasonably relevant potential alternative causes. *Powell-Murphy v. Revitalizing Auto Cmtys. Env'l. Response Tr.*, 333 Mich. App. 234, 250 (2020) (requiring plaintiffs to produce evidence that "excludes other reasonably relevant potential causes of [the] plaintiff's symptoms") (quotation marks and citation omitted); *see Pluck v. BP Oil Pipeline Co.*, 640 F.3d 671, 681 (6th Cir. 2011) (explaining that an expert on specific causation in the toxic-tort context must both "rule in" exposure to the toxin at issue as the cause of the plaintiffs' conditions and "rule out" alternative causes). Evidence about alternative sources of lead or alternative causes of Plaintiffs' alleged conditions that Plaintiffs' experts should

have considered is relevant to assessing the reliability of the experts' differential diagnosis, even if VNA's experts do not identify those alternative sources or causes as the most likely cause of Plaintiffs' injuries.

## **2. VNA's Evidence Is Not Speculative**

Plaintiffs argue that VNA's evidence of alternative sources of lead or alternative causes of Plaintiffs' alleged conditions is "speculative." They are wrong. Plaintiffs' own experts concede that many of the alternative causes and sources of lead identified by VNA's experts exist. And VNA's experts actually tie those alternative causes and sources of lead to Plaintiffs' specific circumstances.

### **a. VNA's Evidence Of Alternative Sources Of Lead Is Not Speculative**

There is ample evidence that alternative sources of lead exist and that Plaintiffs were exposed to these various sources. Plaintiffs' experts agree with VNA's experts that there are a wide variety of "fairly typical" sources of lead exposure. Ex. 2, Bithoney Dep. 37:3-9, 118:12-119:8, 207:6-13; Ex. 3, Michaels Dep. 64:14-65:24 (discussing sources of lead exposure); Ex. 4, Graziano Dep. 69:22-74:1 (same). These sources include, among others, "[l]ead paint, leaded dust, leaded soil, [and] lead in water." Ex. 2, Bithoney Dep. 37:3-9. Plaintiffs' experts also agree that lead-contaminated water comprises a small portion of most individuals' overall lead exposures. *Id.* at 207:6-13; Ex. 4, Graziano Dep. 69:22-70:11 ("[T]he largest source of exposure for children in the United States today is still the legacy of lead

paint, which endures in many, many homes.”). Therefore, testimony of VNA’s experts about the *existence* of these alternative sources is not speculative.

In addition to testifying that other sources of exposure exist, VNA’s experts presented evidence that Plaintiffs were in fact exposed to these various alternative sources. Both Dr. Finley and Dr. Weed explained in their reports that the different alternative sources of lead that they and Plaintiffs’ experts identify are ubiquitous and unavoidable. Ex. 5, Finley Report 66-67; Weed Report 31-33, ECF No. 330-59. Dr. Finley and Dr. Weed also noted that at least one plaintiff, D.W., had a blood lead level of 2.0 µg/dL *before* the water crisis—meaning that she necessarily was exposed to sources of lead other than from post-switch drinking water. Ex. 5, Finley Report 63; Weed Report 226, ECF No. 330-59. Consistent with this evidence, Plaintiffs’ general-causation expert, Dr. Robert Michaels, stated in his report that “the ubiquity of exposure from other sources,” as well as Plaintiffs’ “pre-existing [lead] body burdens,” complicates any attempts to establish causation in this case. See Michaels Report 2, ECF No. 330-15. Given the ubiquity of lead in the environment and Plaintiffs’ pre-existing lead levels, testimony of VNA’s experts that Plaintiffs encountered alternative sources of exposure is not “speculation,” but rather scientific fact.

Finally, VNA’s experts actually investigated potential sources of lead in and around Plaintiffs’ homes in an effort to identify other likely exposure sources, and

in each instance, VNA’s experts found lead in the soil, paint, and dust surrounding Plaintiffs’ homes. *See* Ex. 6, Home Inspection Report (E.S.) tbls.1-7; Ex. 7, Home Inspection Report (A.T.) tbls.1-6; Ex. 8, Home Inspection Report (R.V.) tbls.1-6; Ex. 9, Home Inspection Report (D.W.) tbls.1-6. VNA’s experts then went even further and used that data to estimate Plaintiffs’ blood lead levels during the water crisis. Ex. 5, Finley Report 32-65 (modeling Plaintiffs’ blood lead levels). Finally, Dr. Finley explained that Plaintiffs’ estimated blood lead levels were consistent with Plaintiffs’ actual blood lead test results, which suggests that all of the lead detected in their blood could be attributed to normal environmental exposure sources, rather than supposedly elevated levels of lead in their water. *Id.* at 40 (E.S.); *id.* at 49 (A.T.); *id.* at 56 (R.V.); *id.* at 65 (D.W.). VNA’s experts’ opinions about alternative sources of lead thus are based on evidence, not a “presumption of exposure.” Alt. Sources MIL 11-12, PageID.38627-38628.

Plaintiffs criticize the testimony of VNA’s experts on various grounds. Those are all topics for cross-examination (not exclusion), and anyway, none of Plaintiffs’ criticisms is well-founded. First, Plaintiffs argue that Dr. Finley should not be able to rely on the lead-inspection reports because the reports do not identify “soil-lead hazards” or “paint-lead hazards.” Alt. Sources MIL 7-8, 12, PageID.38623-38624, 38628. But whether lead was found in the soil or paint in and around Plaintiffs’ homes is relevant to causation, even if the levels of lead in those sources were not

high enough to constitute “hazards.” As the reports make clear, the soil and paint in and around each one of Plaintiffs’ homes *did* contain lead, just not always hazardous amounts. Ex. 6, Home Inspection Report (E.S.) tbls.1-7; Ex. 7, Home Inspection Report (A.T.) tbls.1-6; Ex. 8, Home Inspection Report (R.V.) tbls.1-6; Ex. 9, Home Inspection Report (D.W.) tbls.1-6. The relevance of Dr. Finley’s testimony about the existence of lead does not depend on whether there were “hazardous” amounts of lead, but rather whether lead existed and was an alternative source of exposure that Plaintiffs’ experts should have ruled out. After all, Plaintiffs’ experts themselves assert that even very low levels of lead exposure can cause adverse health effects.

Second, Plaintiffs contend that the inspection reports are unreliable because they indicate the presence of lead at the time of testing, not during the water crisis. Alt. Sources MIL 8-9, PageID.38624-38625. They are mistaken. With respect to three of the four Plaintiffs, Plaintiffs present no evidence or reason to believe that the sources and levels of lead detected in 2019 did not exist in 2014-2015. With respect to the remaining Plaintiff, A.T., Plaintiffs state that her home “ha[d] been fire damaged and [was] in the process of being repaired.” *Id.* at 9, PageID.38625. However, they do not explain why fire damage and ongoing remodeling at this home render the lead inspection results unreliable.

Third, Plaintiffs argue that Dr. Finley should not be permitted to present evidence that their exposures were attributable to alternative sources of lead because he does not “purport to fully and accurate[ly] estimate any of the alternative exposures to lead for any Plaintiff.” Alt. Sources MIL 6, PageID.38622. Experts are not required to estimate exposures with precision for those estimates to be relevant. *See Westberry v. Gislaved Gummi AB*, 178 F.3d 257, 264 (4th Cir. 1999). Moreover, Dr. Finley’s reliance on modeling to derive estimates is among the most common methods for estimating exposure in the toxic-tort context. *See Fed. Jud. Ctr., Reference Manual on Scientific Evidence* 530-33, 656-57, 666-67 (3d ed. 2011) (discussing accepted methodologies for assessing exposures in toxic-tort cases).

**b. VNA’s Evidence Of Alternative Causes Of Plaintiffs’ Alleged Conditions Is Not Speculative**

As an initial matter, Plaintiffs contend that the testimony of VNA’s experts about alternative causes is inconsistent, because the experts opined both that Plaintiffs do not suffer from their claimed conditions and that the conditions Plaintiffs identified are attributable to some alternative cause. Alt. Causes MIL 9-10, PageID.37794-37795. There is no inconsistency. VNA’s experts will testify that Plaintiffs do not suffer from any neurodevelopmental deficits, but if they did, those deficits could not be reliably attributed to the specific cause Plaintiffs identify (*i.e.*, lead-contaminated water) in light of the fact that there are various possible

alternative causes. VNA’s experts are permitted to make both points to refute Plaintiffs’ theory.

Plaintiffs are mistaken in asserting that the testimony of VNA’s medical experts is speculative. As with the existence of alternative sources of lead, Plaintiffs’ medical experts agree with VNA’s experts that Plaintiffs’ conditions are associated with a variety of causes and risk factors other than lead. For example, Plaintiffs’ expert responsible for diagnosing Plaintiffs’ conditions, Dr. Mira Krishnan, testified that there are “a lot of causes” of attention problems and that ADHD can be caused by genetics, exposure to various toxins other than lead, and unknown causes. Ex. 10, Krishnan Dep. 154:16-21, 158:17-159:3, 170:4-11. Similarly, one of Plaintiffs’ causation experts, Dr. Joseph Graziano, testified that there is a “long list” of “so-called confounding variables” other than lead that have an effect on intelligence, including the home-rearing environment, birth order, mother’s education, prenatal smoking, and prenatal alcohol abuse. Ex. 4, Graziano Dep. 109:8-112:13. As with other sources of lead exposure, Plaintiffs cannot reasonably claim that there are no other causes of their conditions given that their own experts testify otherwise.

Further, VNA’s experts did not just identify alternative causes of Plaintiffs’ conditions—they actually tied them to Plaintiffs’ particular circumstances. For example, VNA’s medical experts, Dr. Steven Putnam and Dr. David Thompson, both explained that the home-rearing environment and adverse childhood

experiences have been found to affect childhood development. Ex. 11, Putnam Report (A.T) 12, 15-16; Ex. 12, Thompson Report (A.T.) 5-6. Based on this research, they opined that A.T.’s social and familial history could have had an effect on her development. Ex. 11, Putnam Report (A.T.) 15-16; Ex. 12, Thompson Report (A.T.) 5-6. Dr. Thompson similarly identified adverse childhood events, such as the unexpected loss of an uncle, as potentially affecting D.W.’s neurological development. Ex. 13, Thompson Report (D.W.) 4. VNA’s medical expert, Dr. John Gaitanis, also noted specific events in the history of the individual Plaintiffs, including R.V.’s history of febrile seizures, as potential causes of Plaintiffs’ conditions (to the extent any such deficits exist). Ex. 14, Gaitanis Report (R.V.) 11. Given the wide variety of alternative causes of Plaintiffs’ conditions, as well as the evidence tying those alternative causes to the individual Plaintiffs’ circumstances, the testimony of VNA’s experts on these subjects is neither speculative nor irrelevant to whether Plaintiffs have carried their burden of proving that their injuries are attributable to lead-contaminated water.

These various alternative causes are not only relevant to rebutting Plaintiffs’ theory that exposure to Flint water “more likely than not” caused Plaintiffs’ injuries, they are also relevant for purposes of assessing whether Plaintiffs’ experts performed reliable differential diagnoses. For example, Dr. Putnam’s reports on Plaintiffs D.W. and A.T. specifically note that Dr. Krishnan’s diagnoses and attribution of Plaintiffs’

conditions to lead are questionable in light of the fact that “lead exposure accounts for a very small amount of variance in cognitive ability.” Ex. 11, Putnam Report (A.T.) 12; Ex. 15, Putnam Report (D.W.) 20. Dr. Putnam further points out that Dr. Krishnan failed to consider Plaintiffs’ lead exposure in the context of the “many other risk factors impacting on normal childhood development.” Ex. 11, Putnam Report (A.T.) 12; Ex. 15, Putnam Report (D.W.) 20. Plaintiffs’ own causation experts agree that consideration of other relevant causes is a necessary component of attributing causation. In particular, Dr. Graziano testified at his deposition that it is necessary to “evaluate and understand all of the different factors” that have an effect on intelligence to determine “whether or not exposure to lead had contributed to an effect on intelligence for any particular individual.” Ex. 4, Graziano Dep. 113:1-12.

**B. The Testimony Of VNA’s Experts About Alternative Sources Of Lead And Potential Alternative Causes Of Plaintiffs’ Alleged Conditions Is Not Substantially More Prejudicial Than Probative**

Under Federal Rule of Evidence 403, relevant evidence should be excluded only if its probative value is “substantially outweighed” by its capacity to cause unfair prejudice. Fed. R. Evid. 403. Plaintiffs have failed to establish that testimony by VNA’s experts about alternative sources of lead exposure and alternative causes of their alleged conditions would be unfairly prejudicial or that its prejudicial value would substantially outweigh the testimony’s significant probative value.

Plaintiffs assert, in conclusory fashion, that there is a “manifest possibility of juror confusion, undue prejudice, and the possibility that the case will be decided on improper grounds.” Alt. Sources MIL 13, PageID.38629. But they do not offer any explanation why the evidence would create prejudice or likelihood of confusion.

Plaintiffs’ only argument on this point relates to a very narrow theory of prejudice with respect to only one Plaintiff. They contend that it would be too prejudicial to allow VNA’s experts to testify about Plaintiff A.T.’s family circumstances and family history. Specifically, Plaintiffs argue that permitting VNA’s experts to testify about the fact that A.T.’s parents divorced and that she had to move to a new state because of domestic problems at home would “inflame the jury” and prejudice the jurors against A.T. Alt. Causes MIL 10-16, PageID.37795-37801. But it is just as likely that the jurors would feel sympathy for A.T., who has had to undergo these traumas. And VNA’s experts, both of whom have long careers examining and treating children similar to A.T., did not say anything in their reports or depositions that could reasonably be construed as designed to inflame the jury—and Plaintiffs do not cite anything suggesting that they did. Instead, the experts framed their opinions in the language of dispassionate science.

Moreover, their testimony is highly probative. For example, Dr. Thompson’s opinions regarding A.T.’s home life are based on scientific, peer-reviewed studies that found that domestic disturbances similar to those A.T. experienced to have a

negative effect on cognition and behavior. Ex. 12, Thompson Report (A.T.) 6 (citing V.J. Feliiti et al., *Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults*, 14 Am. J. Preventative Med. 245 (1998)). Accordingly, Plaintiffs have fallen far short of meeting their burden of showing that the testimony relating to A.T. is substantially more prejudicial than probative. And they do not even try to satisfy that burden with respect to the other three Plaintiffs.

## CONCLUSION

Plaintiffs' motions to preclude evidence related to alternative sources of lead exposure and alternative causes of Plaintiffs' alleged conditions should be denied.

Respectfully submitted,

**CAMPBELL, CONROY & O'NEIL  
P.C.**

/s/ James M. Campbell

James M. Campbell  
Alaina M. Devine  
1 Constitution Wharf, Suite 310  
Boston, MA 02129  
(617) 241-3000  
jmcampbell@campbell-trial-lawyers.com  
adevine@campbell-trial-lawyers.com

/s/ Cheryl A. Bush

Cheryl A. Bush (P37031)  
100 W. Big Beaver Road, Suite 400  
Troy, MI 48084  
(248) 822-7800  
bush@bsplaw.com

*Attorneys for Veolia North America, LLC, Veolia North America, Inc., and  
Veolia Water North America Operating Services, LLC*

Dated: December 28, 2021

**CERTIFICATE OF SERVICE**

I hereby certify that on December 28, 2021, I electronically filed the foregoing document with the Clerk of the Court using the ECF System, which will send notification to the ECF counsel of record.

By: /s/ James M. Campbell  
James M. Campbell  
jmcampbell@campbell-trial-lawyers.com